First INGV BBOBS campaign in the Ionian sea: crustal velocity model inferred from seismic data recorded

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In May 2007, within the monitoring activities carried out in cooperation with the Italian National Civil Protection Department (DPC), and within the European project NERIES (activity NA6), the Gibilmanna OBS Lab of the INGV has deployed three Broad Band Ocean Bottom Seismometers (BBOBS) in the southern Ionian Sea at 3500-4000 meters of depth. The BBOBS deployed were equipped with a Nanometrics Trillium 120P seismometer and a Cox-Webb 500s-2 Hz Differential Pressure Gauge (DPG). A 21 bits four channel digitizer (SEND Geolon MLS) recorded data at 100 sps. During the nine months of the experiment, the OBS's array recorded more than 400 events: about 90 are teleseismic events, more than 200 are regional events also recorded by the seismic networks onshore, finally more than 100 events were not recorded by any seismic networks on land. We used both the regional and teleseismic events recorded by seismometer and DPG to construct a simple velocity model for the Ionian crust. Teleseismic receiver function were computed from high s/n teleseismic records and dispersion curves were ex-

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tracted for Rayleigh wave recorded. We inverted both the receiver function and Rayleigh dispersion curves data-set to constrain a 1D S-velocity model for the Ionian crust. Moreover a minimum 1-D velocity P-wave model is estimated by inversion of the first P-wave arrivals time of the regional events.